

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

Claim 1 (Currently Amended): A precipitated silica which has the following physical and chemical properties:

CTAB surface area	100-200 m ² /g ₂
BET/CTAB ratio	0.8-1.05 ₂
DBP value	210-280 g/(100 g) ₂
Sears value V ₂	10-30 ml/(5 g) ₂
Moisture level	4-8% [[.]] ₂ <u>and</u>
Ratio of Sears value V ₂ to	
BET surface area	0.150 to 0.370 ml/(5m ²).

Claim 2 (Previously Presented): The precipitated silica as claimed in claim 1, wherein the BET/CTAB ratio is from 0.9 to 1.03.

Claim 3 (Previously Presented): The precipitated silica as claimed in claim 1, wherein the Sears value V₂ is from 20 to 30 ml/ (5 g).

Claim 4 (Previously Presented): The precipitated silica as claimed in claim 1, wherein the CTAB surface area is from 100 to 160 m² /g.

Claim 5 (Previously Presented): The precipitated silica as claimed in claim 1, wherein the DBP value is from 250 to 280 g/(100 g).

Claim 6 (Previously Presented): The precipitated silica as claimed in claim 1, wherein the BET surface area is 80-110 m²/g.

Claim 7 (Previously Presented): The precipitated silica as claimed in claim 1, wherein the BET surface area is 110-150 m²/g.

Claim 8 (Currently Amended): The precipitated silica as claimed in claim 1, wherein the ratio of Sears value V₂ to the BET surface area is from ~~0.140~~ 0.180 to 0.370 ml/(5 m²).

Claim 9 (Withdrawn): A process for preparing a precipitated silica, wherein in succession

- a) an aqueous solution of an alkali metal silicate or alkaline earth metal silicate and/or of an organic and/or inorganic base with pH from 7 to 14 is taken as initial charge,
- b) water glass and an acidifier are metered simultaneously into this initial charge at from 55 to 95°C, with stirring, for from 10 to 120 minutes,
- g) stirring of the resultant suspension is continued at from 80 to 98°C, for from 1 to 120 minutes,
- h) an acidifier is used to acidify to pH of from 2.5 to 5, and
- i) the material is filtered and dried.

Claim 10 (Withdrawn): The process as claimed in claim 9, wherein after step b) the additional steps of

- c) stopping the feed for from 30 to 90 minutes while maintaining the temperature,

and

- d) then, where appropriate, simultaneously feeding water glass and an acidifier at the same temperature, with stirring, for from 20 to 120 minutes, preferably from 20 to 80 minutes
- are carried out once or twice.

Claim 11 (Withdrawn): The process as claimed in claim 9, wherein, following b) or d), in step e) the pH is adjusted to from 3 to 11 by adding an acidifier.

Claim 12 (Withdrawn): The process as claimed in claim 11, wherein, following step b) or d), in step e) the pH is adjusted to from 7 to 10 by adding acid.

Claim 13 (Withdrawn): The process as claimed in claim 11, wherein, in an additional step f) the pH is increased to from 8 to 14 by adding a basic compound.

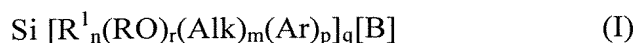
Claim 14 (Withdrawn): The process as claimed in claim 13, wherein the base used comprises an alkali metal silicate and/or alkaline earth metal silicate and/or an alkali metal hydroxide and/or an alkaline earth metal hydroxide.

Claim 15 (Withdrawn): The process as claimed in claim 9, wherein during one of steps a) to h) an organic or inorganic salt is added.

Claim 16 (Withdrawn): The process as claimed in claim 9, wherein for the drying process use is made of a pneumatic drier, spray drier, disk drier, belt drier, rotating-tube drier, flash drier, spin flash drier, or spray tower.

Claim 17 (Withdrawn): The process as claimed in claim 9, wherein
after the drying process, a roller compactor is used for pelletizing.

Claim 18 (Previously Presented): The precipitated silica claimed in claim 1, wherein
the surface of the precipitated silica has been modified with organosilanes of the formulae I
to III



or



where

B is -SCN, -SH, -Cl, -NH₂, -OC(O)CHCH₂, -OC(O)C(CH₃)CH₂ (if q = 1), or -S_w- (if q = 2), B being chemically bonded to Alk,

R and R¹ are an aliphatic, olefinic, aromatic, or arylaromatic radical having 2-30 carbon atoms, optionally with substitution by the following groups: the hydroxyl, amino, alcoholate, cyanide, thiocyanide, halo, sulfonic acid, sulfonic ester, thiol, benzoic acid, benzoic ester, carboxylic acid, carboxylic ester, acrylate, methacrylate, or organosilane radical, where the meaning or substitution of R and R¹ may be identical or different,

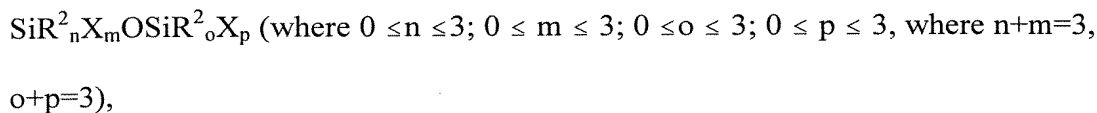
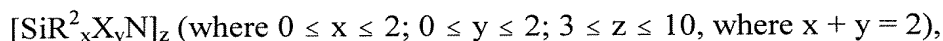
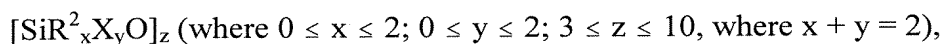
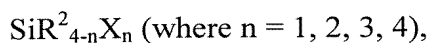
n is 0, 1, or 2,

Alk is a bivalent unbranched or branched hydrocarbon radical having from 1 to 6 carbon atoms,

m is 0 or 1,

- Ar is an aryl radical having from 6 to 12 carbon atoms, preferably 6 carbon atoms, which may have substitution by the following groups: the hydroxyl, amino, alcoholate, cyanide, thiocyanide, halo, sulfonic acid, sulfonic ester, thiol, benzoic acid, benzoic ester, carboxylic acid, carboxylic ester, acrylate, methacrylate or organosilane radical,
- p is 0 or 1, with the proviso that p and n are not simultaneously 0,
- q is 1 or 2,
- x is a number from 2 to 8,
- r is 1, 2, or 3, with the proviso that $r + n + m + p = 4$,
- Alkyl is a monovalent unbranched or branched saturated hydrocarbon radical having from 1 to 20 carbon atoms, preferably from 2 to 8 carbon atoms,
- Alkenyl is a monovalent unbranched or branched unsaturated hydrocarbon radical having from 2 to 20 carbon atoms, preferably from 2 to 8 carbon atoms.

Claim 19 (Previously Presented): The precipitated silica as claimed in claim 1, wherein the surface of the precipitated silica has been modified with organosilicon compounds whose composition is



$\text{SiR}^2_n\text{X}_m\text{NSiR}^2_o\text{X}_p$ (where $0 \leq n \leq 3$; $0 \leq m \leq 3$; $0 \leq o \leq 3$; $0 \leq p \leq 3$, where $n + m = 3$, $o + p = 3$), and/or

$\text{SiR}^2_n\text{X}_m[\text{SiR}^2_x\text{X}_y\text{O}]_z\text{SiR}^2_o\text{X}_p$ (where $0 \leq n \leq 3$; $0 \leq m \leq 3$; $0 \leq x \leq 2$; $0 \leq y \leq 2$; $0 \leq o \leq 3$; $0 \leq p \leq 3$; $1 \leq z \leq 10000$, where $n + m = 3$, $x + y = 2$, $o + p = 3$)

where

R^2 is alkyl and/or aryl radicals, substituted and/or unsubstituted, having from 1 to 20 carbon atoms, and/or is alkoxy, and/or alkenyl, and/or alkynyl groups, and/or is sulfur-containing groups,

X is a silanol, amino, thiol, halogen, alkoxy, alkenyl and/or hydrogen radical.

Claim 20 (Withdrawn): A process for preparing the precipitated silica as claimed in claim 18, wherein the precipitated silicas are modified with organosilanes in mixtures of from 0.5 to 50 parts, based on 100 parts of precipitated silica, in particular from 1 to 15 parts, based on 100 parts of precipitated silica, where the reaction between precipitated silica and organosilane is carried out during the preparation of the mixture (in situ) or externally via spray application and subsequent heat-conditioning of the mixture, via mixing of the organosilane and the silica suspension with subsequent drying and heat-conditioning.

Claim 21 (Canceled):

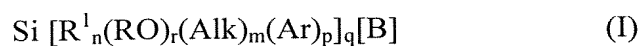
Claim 22 (Canceled):

Claim 23 (Original): A vulcanizable rubber mixture or a vulcanizate comprising, as filler, the precipitated silica as claimed in claim 1, with the following physical and chemical properties:

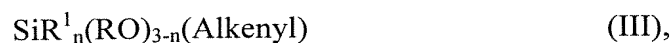
CTAB surface area	100-200 m ² /g
BET/CTAB ratio	0.8-1.05
DBP value	210-280 g/(100 g)
Sears value V ₂	10-30 ml/(5 g)
Ratio of Sears value V ₂ to	
BET surface area	0.150 to 0.370 ml/(5m ²)
Moisture level	4-8%.

Claim 24 (Previously Presented): A precipitated silica produced by the process as claimed in claim 9.

Claim 25 (Previously Presented): A precipitated silica as claimed in claim 23, wherein the surface of the precipitated silica has been modified with organosilanes of the formulae I to III



or



where

B is -SCN, -SH, -Cl, -NH₂, -OC(O)CHCH₂, -OC(O)C(CH₃)CH₂ (if q = 1), or -S_w- (if q = 2), B being chemically bonded to Alk,

R and R¹ are an aliphatic, olefinic, aromatic, or arylaromatic radical having 2-30 carbon atoms, optionally with substitution by the following groups: the hydroxyl, amino, alcoholate, cyanide, thiocyanide, halo, sulfonic acid, sulfonic ester, thiol, benzoic acid, benzoic ester, carboxylic acid,

carboxylic ester, acrylate, methacrylate, or organosilane radical, where the meaning or substitution of R and R¹ may be identical or different,

n is 0, 1, or 2,

Alk is a bivalent unbranched or branched hydrocarbon radical having from 1 to 6 carbon atoms,

m is 0 or 1,

Ar is an aryl radical having from 6 to 12 carbon atoms, preferably 6 carbon atoms, which may have substitution by the following groups: the hydroxyl, amino, alcoholate, cyanide, thiocyanide, halo, sulfonic acid, sulfonic ester, thiol, benzoic acid, benzoic ester, carboxylic acid, carboxylic ester, acrylate, methacrylate or organosilane radical,

p is 0 or 1, with the proviso that p and n are not simultaneously 0,

q is 1 or 2,

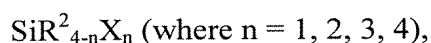
x is a number from 2 to 8,

r is 1, 2, or 3, with the proviso that r + n + m + p = 4,

Alkyl is a monovalent unbranched or branched saturated hydrocarbon radical having from 1 to 20 carbon atoms, preferably from 2 to 8 carbon atoms,

Alkenyl is a monovalent unbranched or branched unsaturated hydrocarbon radical having from 2 to 20 carbon atoms, preferably from 2 to 8 carbon atoms.

Claim 26 (Previously Presented): A precipitated silica as claimed in claim 23, wherein the surface of the precipitated silica has been modified with organosilicon compounds whose composition is



$[\text{SiR}^2_x\text{X}_y\text{O}]_z$ (where $0 \leq x \leq 2$; $0 \leq y \leq 2$; $3 \leq z \leq 10$, where $x + y = 2$),

$[\text{SiR}^2_x\text{X}_y\text{N}]_z$ (where $0 \leq x \leq 2$; $0 \leq y \leq 2$; $3 \leq z \leq 10$, where $x + y = 2$),

$\text{SiR}^2_n\text{X}_m\text{OSiR}^2_o\text{X}_p$ (where $0 \leq n \leq 3$; $0 \leq m \leq 3$; $0 \leq o \leq 3$; $0 \leq p \leq 3$, where $n+m=3$, $o+p=3$),

$\text{SiR}^2_n\text{X}_m\text{NSiR}^2_o\text{X}_p$ (where $0 \leq n \leq 3$; $0 \leq m \leq 3$; $0 \leq o \leq 3$; $0 \leq p \leq 3$, where $n + m = 3$, $o + p = 3$), and/or

$\text{SiR}^2_n\text{X}_m[\text{SiR}^2_x\text{X}_y\text{O}]_z\text{SiR}^2_o\text{X}_p$ (where $0 \leq n \leq 3$; $0 \leq m \leq 3$; $0 \leq x \leq 2$; $0 \leq y \leq 2$; $0 \leq o \leq 3$; $0 \leq p \leq 3$; $1 \leq z \leq 10000$, where $n + m = 3$, $x + y = 2$, $o + p = 3$)

where

R^2 is alkyl and/or aryl radicals, substituted and/or unsubstituted, having from 1 to 20 carbon atoms, and/or is alkoxy, and/or alkenyl, and/or alkynyl groups, and/or is sulfur-containing groups,

X is a silanol, amino, thiol, halogen, alkoxy, alkenyl and/or hydrogen radical.

Claim 27 (Previously Presented): A process for preparing the precipitated silica as claimed in claim 19, wherein the precipitated silicas are modified with organosilanes in mixtures of from 0.5 to 50 parts, based on 100 parts of precipitated silica, in particular from 1 to 15 parts, based on 100 parts of precipitated silica, where the reaction between precipitated silica and organosilane is carried out during the preparation of the mixture (in situ) or externally via spray application and subsequent heat-conditioning of the mixture, via mixing of the organosilane and the silica suspension with subsequent drying and heat-conditioning.

Claim 28 (Currently Amended): An article, comprising:

the precipitated silica as claimed in claim 1,

wherein said article is an elastomer mixture, a vulcanizable rubber mixture, a pneumatic tire, a tire tread, cable sheathing, a hose, a drive belt, a conveyor belt, a V-belt, a roller covering, a tire, a shoe sole, a gasket ~~and~~ or a damping element.

Claim 29 (Currently Amended): A method for producing the article as claimed in claim 27, comprising: adding the precipitated silica to the article during the manufacture of the article.

Claim 30 (Currently Amended): A composition comprising the precipitated silica as claimed in claim 1, wherein the composition is a battery separator, an antiblocking agent, a matting agent in inks and paints, a carrier for agricultural products and feeds, a coating, a printing ink, a fire extinguisher power, a plastic, a non-impact printing product, a paper pulp product or a personal care product.

Claim 31 (Previously Presented): A method for producing the composition as claimed in claim 30 comprising adding the precipitated silica to the composition during the manufacture of the composition.